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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,918	07/27/2001	Radu Victor Balan	2001P13674 US	8793

7590 04/04/2006

Siemens Corporation  
Intellectual Property Department  
186 Wood Avenue South  
Iselin, NJ 08830

EXAMINER
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OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/916,918

Applicant(s)

BALAN ET AL.

Examiner

Michael N. Opsasnick

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-11,14,15,17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leahy et al (6219045) in view of Wakisaka et al (5917944).

As per claims 1,14, and 15, Leahy et al (6219045) teaches a virtual environment system (abstract) comprising:

“an acoustic localizer....environment” as determining the sound location (col. 5 lines 1-10)

“a user data...remote data...system controller.....I/O device” as client/server relationship (Fig. 2);

“wherein control of said remote data.....localizer” as controller determines position of the user (col. 5 lines 15-25);

“wherein data.....said user” as remote data transmission (fig. 2, col. 3 lines 42-51)

As per claim 1, Leahy et al (6219045) does not explicitly teach a plurality of microphones arrayed to span the three coordinate axes of a three dimensional space, however, Wakisaka et al (5917944) teaches directional microphones (Fig. 8, subblocks 802,803; col. 12 lines 31-45; Wakisaka teaches the use of multiple multidirectional microphones wherein the number of microphones used is not limited) and an artisan with ordinary skill in the art of sound processing at the time of invention would readily recognize that the direction of sensitivity comprises a directional cone like volume. Therefore, it would have been obvious to one of ordinary skill in the art of speech devices to modify the device of Leahy et al (6219045) with a microphone array because it would advantageously allow for pickup of ambient noise as well as voices from a defined direction (Wakisaka et al (5917944), col. 12 lines 31-45).

As per claim 3,18,19, Leahy et al (6219045) teaches transmission thru I/O device (fig. 2, col. 3 lines 42-51)

As per claim 4, Leahy et al (6219045) teaches video and sound (fig. 4)

As per claims 5-11, Leahy et al (6219045) teaches I/O of computing devices (including PDA's, wireless, and differing video input → col. 3 lines 51-67).

As per claim 17, Leahy et al (6219045) teaches position determination (col. 5 lines 15-25).

3. Claims 12,13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Leahy et al (6219045) in view of Wakisaka et al (5917944) in further view of Geilhufe et al (6584439).

As per claims 12, 13, and 16, the combination of Leahy et al (6219045) in view of Wakisaka et al (5917944) teaches commands from the user (Fig. 4, subblocks 116, including speech and motion), but the combination of Leahy et al (6219045) in view of Wakisaka et al (5917944) does not explicitly teach voice commands; however, Geilhufe et al (6584439) teaches a GUI using voice commands to control the input from the user (col. 2 lines 50-67; col. 6 lines 53-65). Therefore, it would have been obvious to one of ordinary skill in the art of user interface design to modify the teachings of the combination of Leahy et al (6219045) in view of Wakisaka et al (5917944) so that the devices within the combination of Leahy et al (6219045) in view of Wakisaka et al (5917944) would be voice controlled because it would advantageously allow the user to control the devices without requiring buttons (Geilhufe et al, col. 2 lines 63-66).

As per claim 16, Leahy et al (6219045) further teaches user position detection (col. 5 lines 15-25).

### ***Response to Arguments***

4. Applicant's arguments filed 1/19/2006 have been fully considered but they are not persuasive. As per applicant's arguments with respect to the Leahy reference and sound

Art Unit: 2626

localization (pgs 6-7 of the response), examiner argues that the localization in Leahy is the determination of the avatar's location in a certain "range", the "range" including a location that either requires a broadcast type conveyance of information (the avatar is located across the room), or a whisper (where the avatar is nearby). In other words, a determination is made as to the location of the avatar (as noted also in col. 5 lines 15-25 of Leahy). As per applicant's arguments against the Wakisaka reference, Wakisaka employs a directional microphone (which, by definition, focus's on capturing sounds from a particular location, or direction), and a multidirectional microphone (which, by one of ordinary skill in the art of microphone design, is understood to mean three axes in three dimensional space, or multidimensional), and the combination of the two covers the claim scope "a plurality of microphones" along with the claim scope of "a plurality of microphones arrayed to span the three coordinate axes of a three dimensional space" – this particular claim scope is covered by the definition of a "multidirectional" microphone. Examiner notes that further claim limitations pertaining to the directionality calculation for localizing the sound source would overcome the prior art rejection. Lastly, although applicant has analyzed both the Leahy and Wakisaka reference, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2626

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno  
4/1/06



**VIJAY CHAWAN**  
**PRIMARY EXAMINER**